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The combination-weights for the results of different evenings are to be the weights found by the preceding investigations. And the weight of the final result will be the sum of these weights.

The attention of observers is particularly called to the circumstance that this is the *only* combination by which the weight of results is greatly increased. In all the preceding cases, however much the number of stars or number of comparison-stations was increased, the weight of the result could not be increased beyond a value very little greater than that for a single star at a single comparison-station. But by increasing the number of nights of observation, the weight of the final result may be increased without limit.

Measures of ε Böotis, by Mr. Fletcher.

"By a mean of four nights' measures of this star, taken under very favourable circumstances with the 6-foot equatoreal, I find,

Position 321° 40′. Distance 2″·93. Epoch 1850·41.

Note from Professor Piazzi Smyth.

"A careful examination of the heavens in a clear night has satisfied me that the stars in Lalande, 33239 and 33244, are the same. I find the following mean places with the transit and mural circle, Epoch 1850·48 :—

	Mag.	R.A.	Obs.	N.P.D.	Obs.	Epoch.
		h m s		° ′ ″		
Lalande {33239 33244}	7	17 55 50·68	(3)	15 24 29·1	(3)	1850·48

On the Comet seen by Mr. Jenkins in November last.

In the *Monthly Notice* of March last, some account is given of a comet seen by Mr. Jenkins on his voyage to Rio Janeiro. It was supposed at the time that the comet thus seen might be the comet of long period which was expected in 1848, and further inquiry was made to ascertain the particulars more accurately.

Mr. Jenkins unfortunately died at Rio, but Captain Horner, the master of the Maryland (the vessel in which Mr. Jenkins sailed), states that the comet was seen on Nov. 15th, sea account : that the true time on board was 7^{h} 30^{m} P.M., latitude 13° 32′ South, long. 34° 50′ West.

The bearing of the comet from the ship was W.N.W., altitude of the nucleus 48°, and its course S.E. and N.W. ; it was in sight about an hour.

Mr. Hind remarks that these data differ considerably from those previously received. The place of the comet, according to Captain Horner's particulars, would be,

R.A. 20^{h} $36^{m}\cdot 6$. N.P.D. 85° 42′ Nov. 15, at 9^{h} 49^{m} G.M.T.

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This position is quite irreconcileable with the track of the great comet of 1848 laid down by Mr. Hind, and establishes his opinion that the body seen by Mr. Jenkins is not the expected comet. M. Bomme's investigations, however, have shown that the return of the expected comet will yet be delayed for a considerable period.

Mr. Heath proposes the following rule for converting sidereal into solar time, and *versâ vice*, when the computer has no tables to assist him:—

The datum is the proposed time, solar or sidereal. The correction is thus obtained:—

Write down the proposed time, considering the hours as minutes, the minutes as seconds, after reducing the seconds to decimals of a minute; call this a. Write under this the same number, again considering the minutes as seconds, and reducing to decimals, as before; call this b. Subtract b from a, and divide the remainder by 6; this quantity is very nearly the reduction of the given to the proposed time, being *added* if the given time is mean solar time, and *subtracted* in the contrary case.

Where great accuracy is required, a small quantity is to be applied to the datum and to its correction.

Add to b one-third of its value, and carry the decimal point two places to the left. This is then to be added to the given time; call the result t.

Add to b one-thirtieth of its value, and carry the decimal point two places to the left. This is then to be added to the correction already found; call the result t'.

Then $t \pm t'$ is $\left\{\begin{matrix}\text{Sidereal}\\\text{Solar}\end{matrix}\right\}$ Time for the Datum in $\left\{\begin{matrix}\text{Solar}\\\text{Sidereal}\end{matrix}\right\}$ Time.

$$\begin{array}{lcr}
 & & {}^{\text{h}}\ \ {}^{\text{m}}\ \ \ {}^{\text{s}}\\
\text{Given Time} & = & 23\ 56\ \ 4{\cdot}09\\
a & = & 23\ 56{\cdot}07\\
b & = & 23{\cdot}93\\
\hline
\text{Difference} & = & 23\ 32{\cdot}14\\
\text{Correct.} = \frac{1}{6} & = & 3\ 55{\cdot}36
\end{array}$$

If great accuracy is required:—

$$\text{Addition to Datum} = \frac{23{\cdot}9 + \frac{1}{3}\,23{\cdot}9}{100} = 0^{\text{s}}{\cdot}32;\ t = 23^{\text{h}}\ 56^{\text{m}}\ 4^{\text{s}}{\cdot}41$$

$$\text{Addition to Correct.} = \frac{23{\cdot}9 + \frac{1}{30}\,23{\cdot}9}{100} = 0^{\text{s}}{\cdot}25;\ t' = 3\ 55{\cdot}61$$

$$23^{\text{h}}\ 56^{\text{m}}\ 4^{\text{s}}{\cdot}41 + 3^{\text{m}}\ 55^{\text{s}}{\cdot}61 = 24^{\text{h}}\ 0^{\text{m}}\ 0^{\text{s}}{\cdot}02\ \text{Sid. Time} = 23^{\text{h}}\ 56^{\text{m}}\ 4^{\text{s}}{\cdot}09\ \text{Solar Time.}$$

$$23\ 56\ \ 4{\cdot}41 - 3\ 55{\cdot}61 = 23\ 52\ \ 8{\cdot}80\ \text{Solar Time} = 23\ 56\ \ 4{\cdot}09\ \text{Sid. Time.}$$

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